



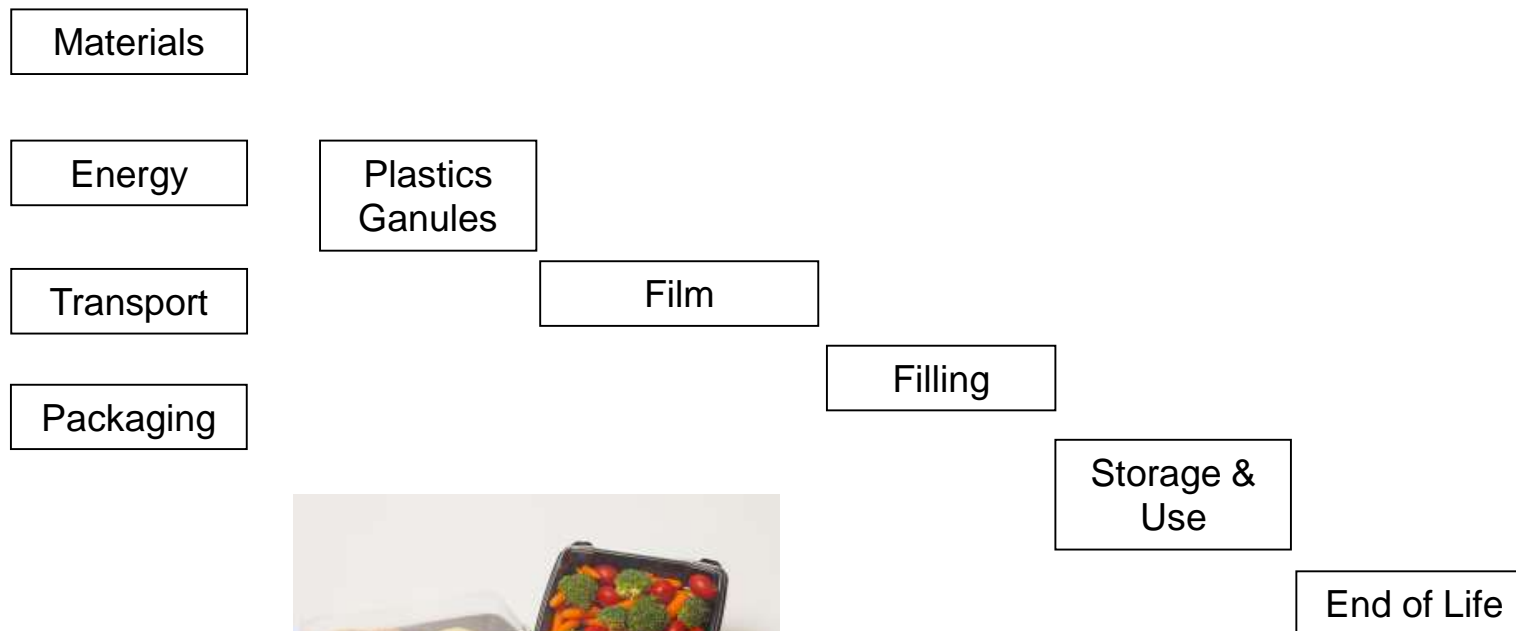
# Managing information along the value chain for Risk Assessment and LCA PlasticsEurope experience

Guy Castelan

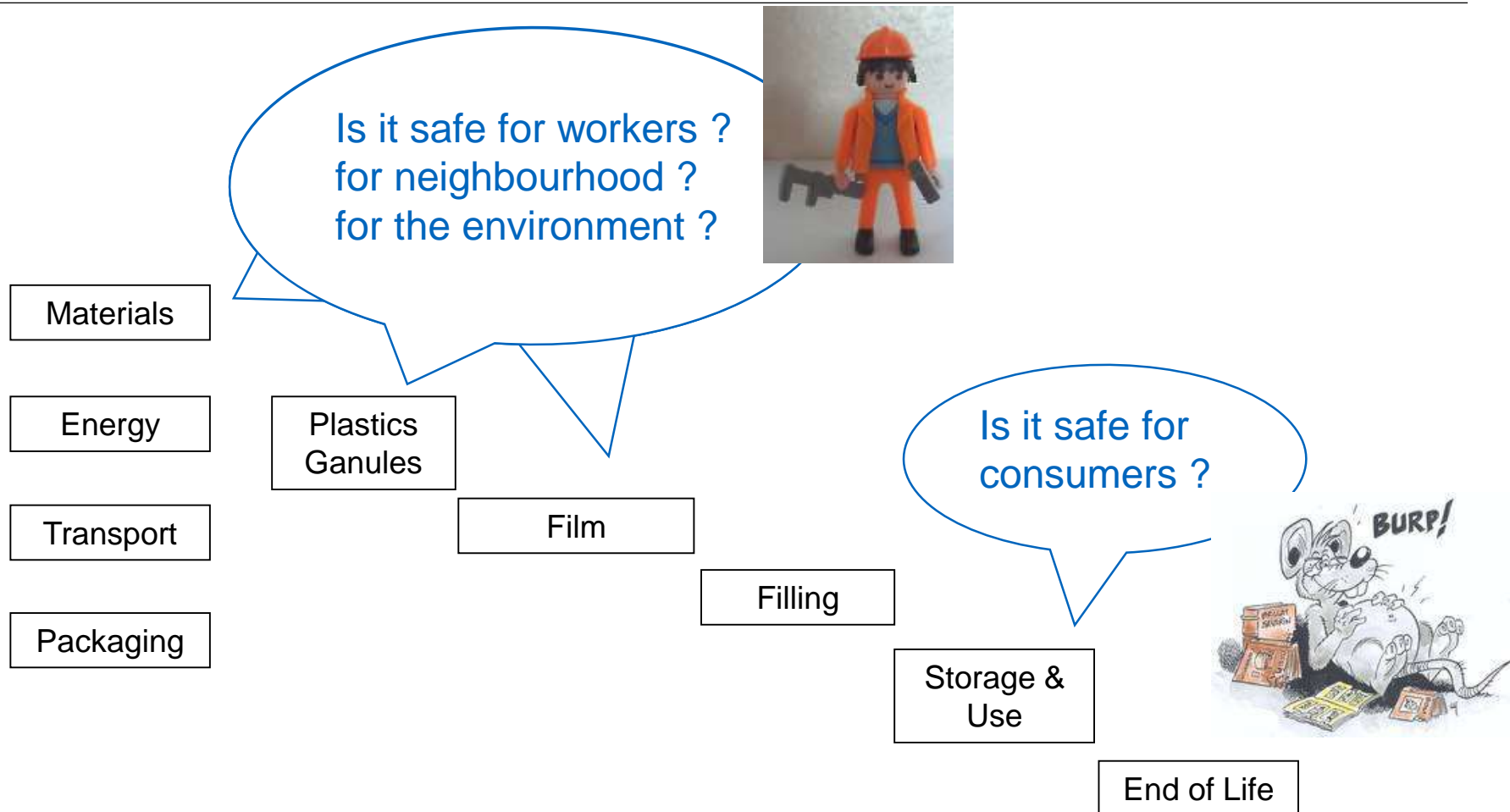
5 september 2017, LCM 2017

**PlasticsEurope**  
Association of Plastics Manufacturers

# Let's consider a Life Cycle of a packaging

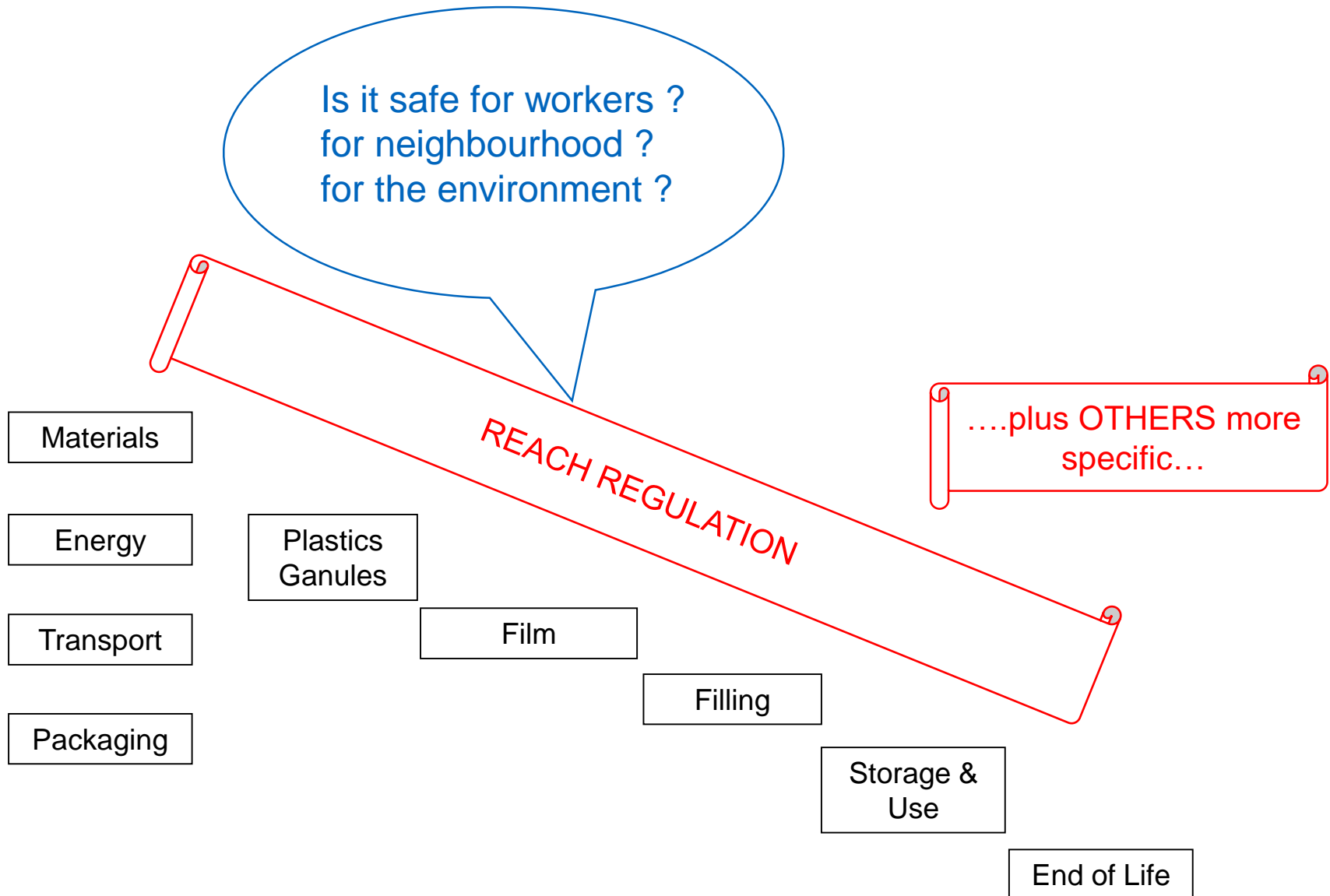


# Risk assessments along this life cycle

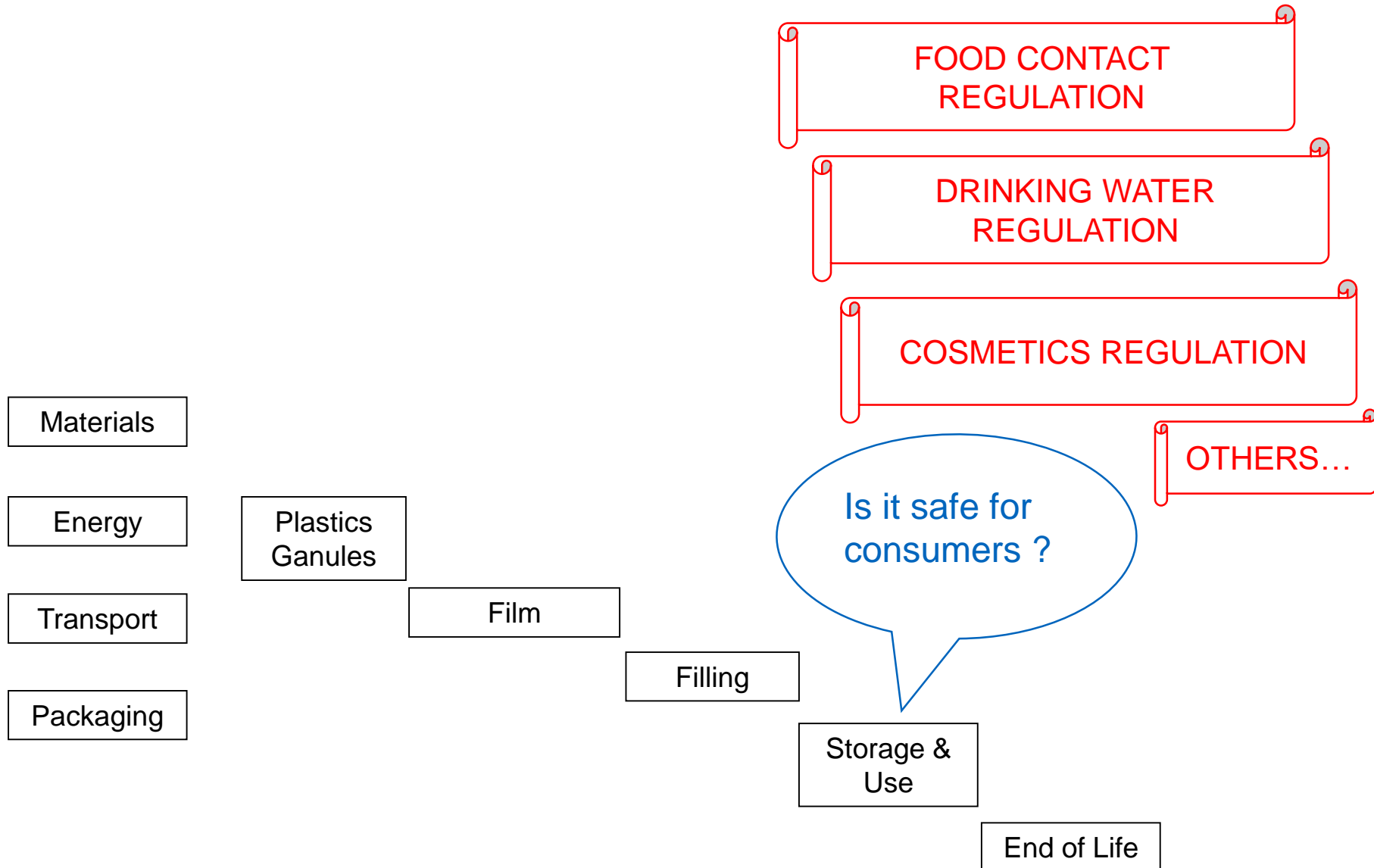


- Answering these questions uses **Risk Assessment**
- The way RA is done and the level of risk is given by **Regulation**

# Regulations along the life cycle



# Regulations along the life cycle



Risk assessment are carried out for each substances. It takes the form of lists of substances with maximum limit of concentration or migration

- The full chemical composition of the packaging must be known including traces of starting substances, additives, impurities...at very low threshold
- **The supply chain must transmit the information until the one putting the packed product on the market**



# What does happen at first hand along the supply chain ?

- When there is no sectorial organisation
  - Each actor interprete differently the requirements of information and send questionnaires upstream
  - They are all different and tend to ask more than required (umbrella effect)
  - Suppliers hesitates to send information downstream
    - ✓ fear of misinterpretation, of misuse
    - ✓ fear of being challenged (substance ban, deselection...)
    - ✓ Confidentiality issue
- There is a need for
  - common interpretation of regulation
  - mutual understanding
  - level playing field
  - respect of confidentiality
  - trust



... so what can be done ?

➤ Sectorial guidelines !



Most often co-developped through authorities and industry collaboration

- Food contact
- Cosmetics
- Reach



**EUROPEAN COMMISSION**  
HEALTH AND CONSUMERS DIRECTORATE-GENERAL

Safety of the Food chain  
Innovation and sustainability

Brussels, 28.11.2013

## Union Guidance on Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food as regards information in the supply chain

**Support**

- › CSR/ES roadmap
- › ENES
- › Presentation: Communication in the supply chain

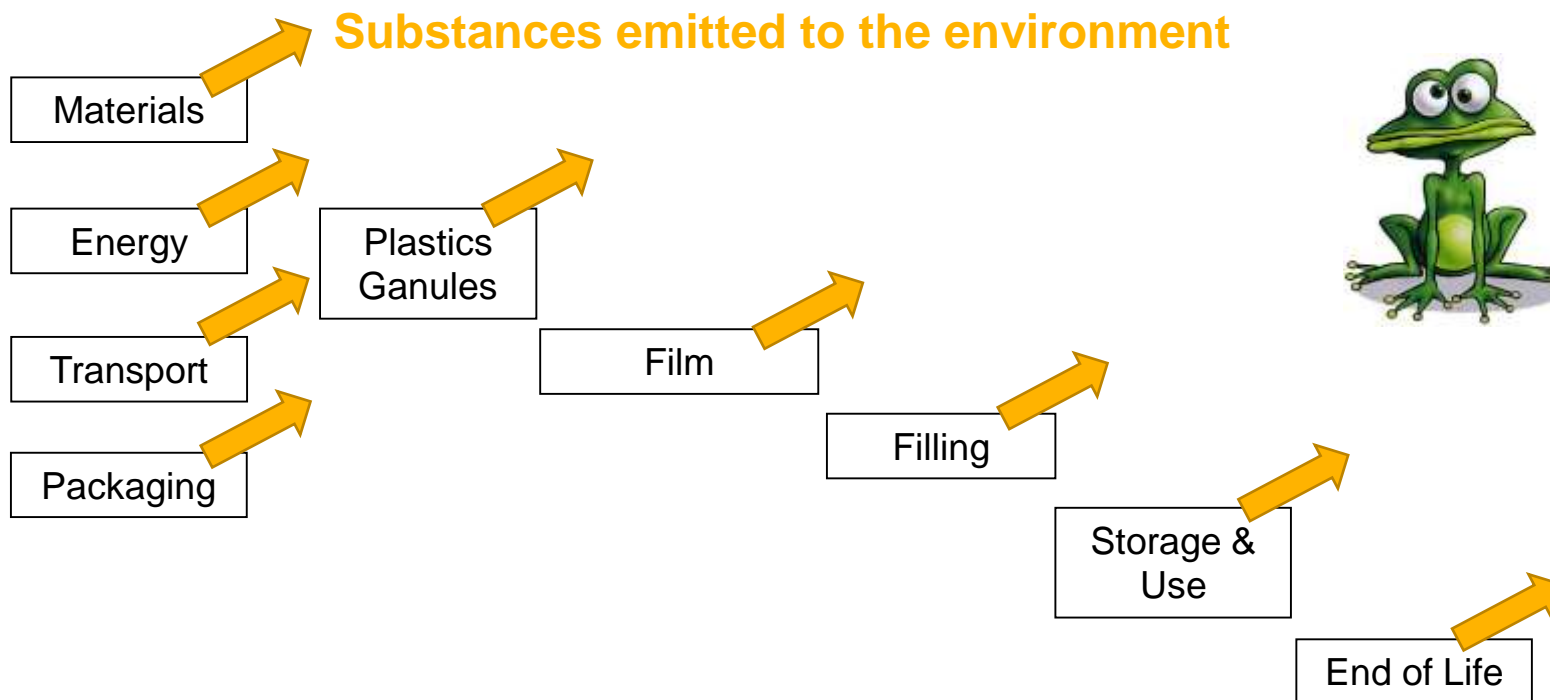
**SAFETY EVALUATION OF PACKAGING UNDER THE COSMETICS REGULATION 1223/2009**

**GUIDANCE ON INFORMATION EXCHANGE ALONG THE VALUE CHAIN**

Version 17 March 2017

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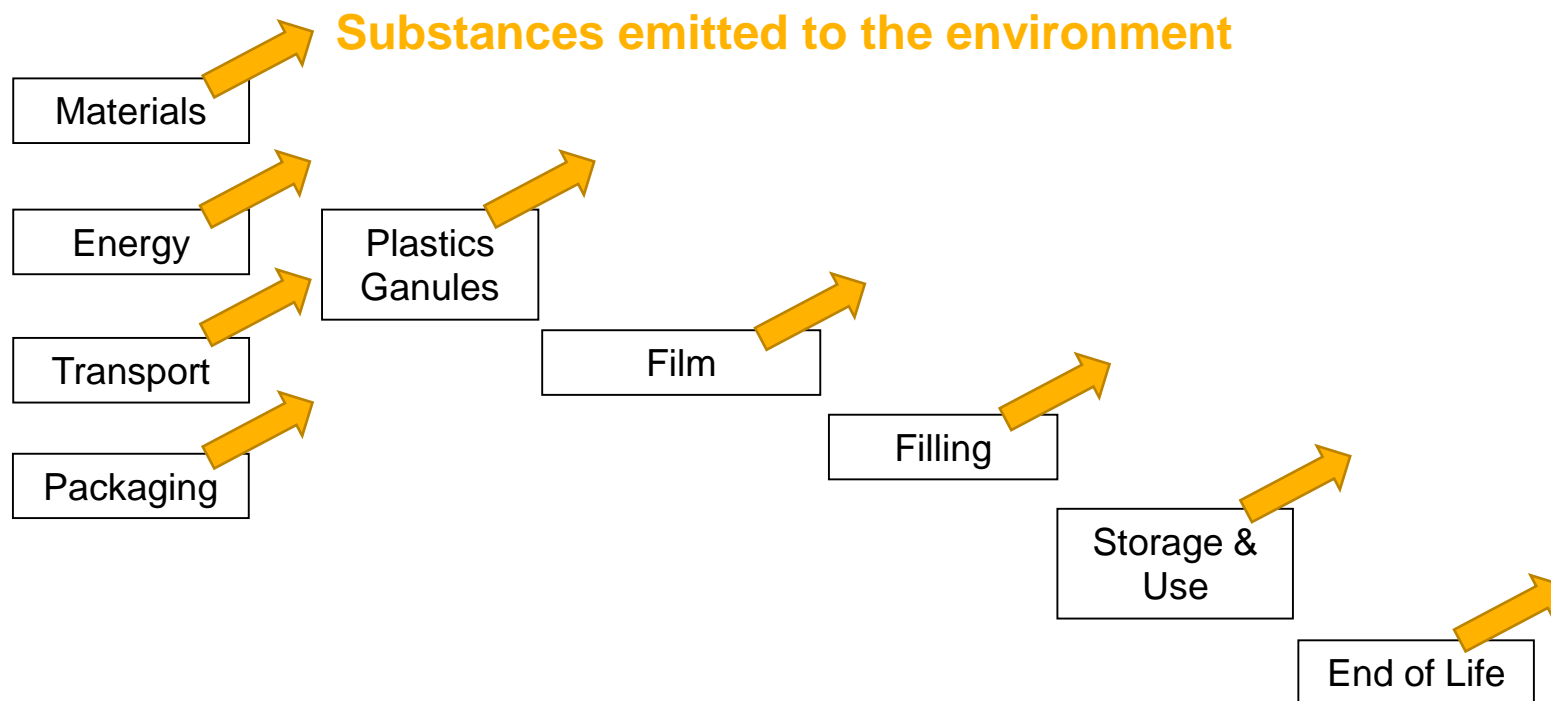
# Let's consider the Life Cycle Assessment of the packaging



Compilation of all substances emitted to the Environment along the life cycle gives the **life cycle inventory** (output part)

Outputs				
Type Of Flow	Classification	Flow	Variable	Results
Product flow	Wearable substances / Materials / Plastics	Film (plastic)	kg	1.0 kg (1000)
Product flow	Depleted goods / Radioactive waste	Empty plastic bottles	kg	3.2594E-7 kg
Product flow	Depleted goods / Radioactive waste	Used plastic bottles	kg	1.02404E-0 kg
Product flow	Depleted goods / Radioactive waste	Plastic and other radioactive waste	kg	4.93942E-6 kg
Product flow	Depleted goods / Radioactive waste	Depleted water	kg	2.34406E-4 kg
Elementary flow	Emissions / Emissions to air / Emissions to air, unspecified	1,2-dichloroethane	kg	4.77201E-11 kg
Elementary flow	Emissions / Emissions to water / Emissions to fresh water	1,2-dichloroethane	kg	1.97805E-17 kg
Elementary flow	Emissions / Emissions to air / Emissions to air, unspecified	1,2-dichloroethane	kg	2.88228E-16 kg
Elementary flow	Emissions / Emissions to water / Emissions to fresh water	1,2-dichloroethane	kg	4.40745E-16 kg
Elementary flow	Emissions / Emissions to water / Emissions to fresh water	1,2-dichloroethane	kg	3.81433E-16 kg
Elementary flow	Emissions / Emissions to air / Emissions to air, unspecified	2,2,2-trifluoroethane	kg	1.36825E-14 kg
Elementary flow	Emissions / Emissions to water / Emissions to fresh water	2,2,2-trifluoroethane	kg	9.31396E-16 kg
Elementary flow	Emissions / Emissions to water / Emissions to sea water	acetone	kg	1.40146E-0 kg
Elementary flow	Emissions / Emissions to water / Emissions to fresh water	acetone	kg	3.22491E-10 kg
Elementary flow	Emissions / Emissions to water / Emissions to sea water	acetone	kg	5.77955E-10 kg
Elementary flow	Emissions / Emissions to water / Emissions to fresh water	acetone	kg	1.31944E-10 kg
Elementary flow	Emissions / Emissions to air / Emissions to air, unspecified	acetone	kg	1.17430E-0 kg
Elementary flow	Emissions / Emissions to water / Emissions to fresh water	acetone	kg	2.29206E-0 kg
Elementary flow	Emissions / Emissions to water / Emissions to fresh water	acetone	kg	2.43950E-10 kg
Elementary flow	Emissions / Emissions to water / Emissions to sea water	acetone	kg	8.11828E-14 kg
Elementary flow	Emissions / Emissions to air / Emissions to air, unspecified	acetone	kg	1.07204E-6 kg
Elementary flow	Emissions / Emissions to air / Emissions to air, unspecified	acetone	kg	7.96285E-11 kg
Elementary flow	Emissions / Emissions to water / Emissions to fresh water	acetone	kg	3.96205E-0 kg
Elementary flow	Emissions / Emissions to air / Emissions to air, unspecified	acetone	kg	5.81912E-10 kg

# Let's consider the Life Cycle of a food packaging



- As an actor of the supply chain, you just can measure your data (primary data)
- All the rest generally comes from databases , thus are generic (secondary data)
- **If you want to be more specific, you need to get data from the other actors of your value chain.**



- you would like to get the whole model of the dataset you use to
  - Track (always possible) errors
  - Check consistency with methodology/assumptions/background database... of similar dataset (ex: recent PlasticsEurope datasets over 10 years old Boustead ones)
  - Testing some assumptions (e.g. influence of different energy mix)
  - Trying to adapt it
  - Identifying hot spot
- If it is the LCA of a specific product, you would like to get specific datasets



# But from the LCI supplier dataset perspective...

- Confidentiality issue
  - Protection of your competitiveness, your know-how
  - Competition law (large grey zone of interpretation)
- Fear of giving readability on your costs
- Fear of ingerence in your hot spot
- Fear of being deselected...





## Build mutual understanding and trust

- Life Cycle Initiative publication: global guidance on LCA database
- (O)P(EF)CR....

### ➤ For averaged datasets

- Partial disaggregation is possible for commodities (large number of producers) but
  - Consider the market may work like a pool, all products being mixed and averaged per se, so not traceable
  - Check realism of re-engineering dataset
- Partial disaggregation is not possible when there are not enough producers (3 being an absolute minimum)

### ➤ For individual dataset,

- It is up to business to decide. Most often, it is confidential.
- But what about comparability of datasets from 2 different companies ?
- Need for common rules (As an example PlasticsEurope recommendation on Steam Cracker allocation for the sake of comparability of petrochemical products)



# Plastics

The Material for the 21st Century